(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 1 September 2005 (01.09.2005)

(10) International Publication Number WO 2005/080393 A1

(51) International Patent Classification7: C07D 471/04, 487/04, A61K 31/519

(21) International Application Number:

PCT/US2005/004630

(22) International Filing Date: 14 February 2005 (14.02.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/544,944

14 February 2004 (14.02,2004)

(71) Applicant (for all designated States except US): IRM LLC [US/US]; P.O. Box HM 2899, Hamilton, HM LX (BM).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): CHOI, Ha-Soon [KR/US]; 13716 Fontanelle Place, San Diego, California 92128 (US). WANG, Zhicheng [CN/US]; 4178 Decoro Street, Apt. 18, San Diego, California 92122 (US). GRAY, Nathanael Schlander [US/US]; 5652 Lamas Street, San Diego, California 92122 (US). GU, Xiang-ju [CN/US]; 10675 John Jay Hopkins Drive, San Diego, California 92122 (US). HE, Xiaohui [CN/US]; 12461 Dormouse Road, San Diego, California 92129 (US). HE, Yun [CN/US]; 10632 Senda Acuario, San Diego, California 92130 (US). JIANG, Tao [CN/US]; 10721 Calle Mar De Mariposa, San Diego, California 92130 (US). LIU, YI [CN/US]; 4255 Corte de Sausalito, San Diego, California 92130 (US). RICHMOND, Wendy [US/US]; 5230 Fiore Terrace #116, San Diego, California 92122 (US). SIM, Taebo [KR/US]; 12664 Torrey Bluff Drive, #212, San Diego, California 92130 (US). YANG, Kunyong [CN/US]; 5230 Fiore Terrace, Apt. K319, San Diego, CA 92122 (US).
- (74) Agents: REID, Scott, W. et al.; The Genomics Institute of the Novartis Research Foundation, 10675 John Jay Hopkins Drive, San Diego, California 92121 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD. MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOUNDS AND COMPOSITIONS AS PROTEIN KINASE INHIBITORS

(57) Abstract: The invention provides a novel class of compounds, pharmaceutical compositions comprising such compounds and methods of using such compounds to treat or prevent diseases or disorders associated with abnormal or deregulated kinase activity, particularly diseases or disorders that involve abnormal activation of the FAK, Abl. BCR-Abl, PDGF-R. c-Kit. NPM-ALK, Fit-3, JAK2 and c-Met kinases.